



Memorandum

**TO: Community and Economic Development
Public Safety, Finance and Strategic
Support Committees**

FROM: William McDonald

SUBJECT: See Below

DATE: September 14, 2010

Approved

Date

9/15/10

SUBJECT: ADOPTION OF THE 2010 CALIFORNIA BUILDING STANDARDS

RECOMMENDATION

- 1) Recommend that City Council approve an Ordinance amending Title 24 of the San José Municipal Code to:
 - a) Adopt the 2010 editions of the California Building Code (CBC), California Residential Code (CRC), California Electrical Code (CEC), California Mechanical Code (CMC), California Plumbing Code (CPC), California Historical Building Code (CHBC), California Existing Building Code (CEBC), California Green Building Standards Code (CGBSC) and the 2009 edition of the International Existing Building Code Appendix Chapters A2, A3 and A4; and
 - b) Adopt local amendments regarding certain structural design requirements, compliance with FEMA regulations, fire sprinkler regulations, and other building and fire safety requirements.
- 2) Recommend that City Council approve an Ordinance amending Chapter 17.12 of the San Jose Municipal Code to:
 - a) Adopt the 2010 edition of the California Fire Code (CFC), and the Standards referenced in 2010 CFC; and
 - b) Adopt local amendments regarding the design and installation requirements for fire sprinkler systems, fire standpipe and hose systems, centrifugal fire pumps, private fire service mains, fire alarm systems, clean agent extinguishing systems, fire protection systems in clean rooms, and other fire safety requirements.

BACKGROUND

This memo addresses item (2) of the Recommendation stated above.

The Building Standards Commission (BSC) publishes triennial editions of the California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code. On July 4, 2010, the BSC published the 2010 edition of the California Building Standards Code. The 2010 California Building Standards Code will apply to any building or structure for which an application for a building or fire permit is made on or after January 1, 2011. The 2010 California Fire Code (CFC) is based on the International Code Council published 2009 International Fire Code (IFC).

The State of California allows local municipalities to modify the state adopted building standards to make them more restrictive (not less), provided certain express findings are made that the proposed modifications are necessary due to special local climatic, geological, or topographical conditions that can affect the health, welfare, and safety of local residents. Any local amendments must be made prior to the effective date of State Codes (January 1, 2011).

In accordance with code adoption timeline, staff is presenting for approval of the CED and PSFSS Committees a summary of proposed amendments to Chapter 17.12 of the San Jose Municipal Code, to adopt the 2010 California Building Standards Code, California Code of Regulations (CCR) Title 24, Part 9, and the Standards referenced in CCR Title 24, Part 9. Upon approval, staff will present to the City Council proposed amendments to the 2010 California Building Standards Code.

The Fire related codes that will be adopted in the proposed ordinance are:

- 2010 California Fire Code (CFC) - CCR Title 24, Part 9
- The Standards referenced in 2010 California Fire Code (CFC)

SUMMARY OF AMENDMENTS

A. Fire Sprinkler Regulations (CFC Chapter 9, NFPA 13D)

The CFC sections pertaining to fire sprinklers are modified to maintain current standards and (a) require fire sprinkler systems in buildings when changing a building use to that of a higher hazard occupancy classification; (b) require fire sprinkler systems in buildings when an increase of building floor area resulting in a total building area exceeding 10,000 square-feet; (c) require fire sprinkler coverage in areas exempted by the CFC and NFPA 13D; (d) require fire sprinkler systems in new one- and two-family dwellings; (e) disallow the use of a multi-purpose residential fire sprinkler system in one- and two-family dwellings and townhomes; and (f) require fire sprinkler systems in existing one- and two-family dwellings when increasing the building floor-area by 500 square-feet resulting in a total building area exceeding 3,600 square-feet.

The 2010 California Fire Code (CFC) does not specifically address fire sprinkler requirements when additions or change of a building use is proposed to an existing building. The requirements listed under items (a), (b), and (c) above for an existing building had been implemented during the past decade and had been proven practical and effective in minimizing the loss of life and property.

This is the first time that residential fire sprinkler system (NFPA 13D) is required throughout California for new one- and two-family dwellings. We believe residential fire sprinkler systems shall be required under a covered porch so that a safe exit path for the occupant(s) can be provided. Fire sprinkler requirement in attics is consistent with other jurisdictions in Santa Clara County. We propose to disallow the use of multi-purpose residential fire sprinkler system because (a) Multi-purpose systems will allow potable water to have direct contact with sprinkler heads and currently there is no sprinkler head listed as "lead-free"; (b) Shut-off devices installed in a multi-purpose system would automatically shut off water-supply for both domestic line and fire sprinkler system which would essentially leave the dwelling without fire sprinkler protection; (c) All multi-purpose system components must be listed for fire protection usage; (d) Fire sprinkler system integrity test would damage the plumbing system and cause system to leak under high testing pressure; (e) Along with San Jose, most local jurisdictions of Santa Clara County require a water bell to be installed outside of the dwelling so that both occupant(s) and their neighbors will be alerted of fire. The installation of multi-purpose systems would trigger false alarms with the movement of water in the piping system.

The 2010 California Residential Code (CRC) exempts residential fire sprinkler requirements from existing one- and two-family dwellings. Most jurisdictions in Santa Clara County agree that 500 square-foot of structure addition is significant to an existing one- or two-family dwellings. All jurisdictions in Santa Clara County believe 3600 square-foot of total building area would generate a significant amount of fire load to be suppressed by a residential fire sprinkler system.

B. Elevator for Firefighter Use

To enhance firefighting capacities in high-rise buildings, current Municipal Code mandates all high-rise buildings to be equipped with a Firefighter Breathing Air Replenishment System. Developers have been experiencing difficulties in implementing the Breathing Air Replenishment System and are requesting alternatives to the requirement to install this system.

This proposed elevator dedicated for firefighter use would quickly deliver firefighters and firefighting equipment to the staging floor. It will not require installation of any additional elevators. It would require additional protection safeguards be implemented to at least one of the elevator cars that are required in high-rise buildings in terms of: fire rating of elevator lobby; emergency power supplies; hoistway water protection and protection of wiring and cables.

C. Fire Access Requirements for Solar Photovoltaic System

Solar Photovoltaic Systems generate electricity from the sun through the modules mounted on the buildings or on ground supporting frames. To make an efficient system, the modules are typically installed in a manner to provide the best access to the sunlight, which could make it difficult for firefighters to perform rescue and fire suppression operations. To address this issue, the California Department of Forestry and Fire Protection – Office of the State Fire Marshal (CAL Fire-OSFM) published Solar Photovoltaic Installation Guidelines for both one- and two-family dwellings and commercial buildings. Following the publication of these guidelines in April 2008, several cities of Santa Clara County adopted CAL Fire-OSFM guidelines in its entirety as their own policy with minor modifications (Palo Alto, Milpitas, Santa Clara, etc).

The City of San Jose is considered a nation-wide recognized leader embracing green technologies. During the past 10 years, roughly 1200 solar photovoltaic systems have been installed on homes, commercial buildings and free-standing structures in San Jose. The Fire Department has oftentimes been contacted by solar industry members, local builders and designers asking whether San Jose has its own photovoltaic installation policy or were going to adopt CAL Fire-OSFM guidelines. In response to customers' inquiries, we are proposing to adopt CAL Fire-OSFM guideline addressing roof access requirements for commercial buildings. The proposed ordinance will have no impact to photovoltaic systems being installed in one- and two-family dwellings.

D. Marinas (CFC Chapter 45)

Chapter 45 is a brand new chapter in the 2010 California Fire Code addressing fire protection requirements for Marina Facilities. A marina is defined as any portion of the ocean or inland water, either naturally or artificially protected, for the mooring, servicing or safety of vessels which includes artificially protected works, the public or private lands ashore, and structures or facilities provided within the enclosed body of water and ashore for the mooring or servicing of vessels or the servicing of their crews or passengers. CFC Chapter 45, including the Tables therein, is adopted without any amendments.

E. Construction Requirements for Existing Buildings (CFC Chapter 46)

This is another new chapter added in the 2010 California Fire Code regarding construction requirements for existing buildings. CFC Chapter 46, including the Tables therein, is adopted without any amendments.

F. Referenced Standards (CFC Chapter 47)

CFC Chapter 47 is adopted as part of San Jose Municipal Code with the following amendments:

1. NFPA 13R-2010 will not be adopted as a part of CFC Chapter 47, nor as part of San Jose Municipal Code. This is consistent with our past practices and also in line with other jurisdictions in Santa Clara County.

2. National Fire Protection Association (NFPA) Standards NFPA 13D-2010, NFPA 13-2010, NFPA 14-2007, NFPA 20-2007, NFPA 24-2010, NFPA 72-2010, and NFPA 2001-2008 are adopted with amendments.
3. Add NFPA 96-2008 as a standard without any amendments to address ventilation control and fire protection requirements for commercial cooking operation.
4. Add NFPA 318-2009 as a standard with amendments to address fire protection requirements for semiconductor fabrication facilities.

PUBLIC OUTREACH/INTEREST

In the Bay Area, the City of San Jose is in the forefront in identifying amendments to the 2010 California Building Standards and informing the public of these proposed amendments. Staff is in the process of presenting the proposed amendments to design professionals, developers and contractors in roundtable meetings to be held on August 19, September 1, 2, 9 and 14.

Information about the new codes is available in the Permit Center counter and has been published in the City's web site (www.sanjoseca.gov/building).

/s/
William McDonald
Fire Chief